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METHOD OF OPERATION

Coin Control Circuit - For Long Distance Cordless Trunks - Arranged for Offices Requiring Ringdown Protection - For Final Multiple Banks - Panel Machine Switching -

Remove the item (black) from line 2 of paragraph 2, line 1 of paragraph 4, and line 1 of paragraph 6.

Remove the item (red) from line 7 of paragraph 2, line 1 of paragraph 5, and line 1 of paragraph 7.

(4434)

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ENG.-B.S.
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MG

CHK'D.-J.I.

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METHOD OF OPERATION
COIN COLLECT CIRCUIT

For Long Distance Incoming Cordless Trunks - Arranged For Offices Requiring Breakdown Protection - For Final Line Switch Multiple Banks - Full Mechanical Power Driven System.

GENERAL DESCRIPTION.

1. This circuit is used by a machine switching "B" operator, in collecting or returning a coin on long distance calls from a mechanical pay station.

FIGURES 1, 2, 3, 8 AND 9.

2. To collect a coin, the machine switching "B" operator operates the collect key (black), thereby connecting coin collect battery (110 volts positive) to the tip and ring side of the subscriber's line, and lighting a lamp. A low tone is also transmitted back to the toll operator as an indication that the coin is being collected. When the coin is collected, or the collect key is released, the lamp is extinguished and the tone is disconnected. To return a coin the operation is the same, except the return key (red) is operated and a high tone is sent back to the toll operator.

FIGURES 4, 5 AND 6.

3. The operation of this circuit is the same as for figures, 1, 2, 3, 8 and 9 except a time interval is allowed for the coin to be collected, or returned. Under this condition, the particular key used may or may not be held operated until the lamp is extinguished, thereby indicating that the time interval has expired.

DETAILED DESCRIPTION

FIGURES 1, 2, 3, 8 AND 9.

4. When a coin is to be collected, the collect key (black) is operated, connecting ground to lead CC, thereby operating a relay in the associated cordless selector circuit. A circuit is now closed operating the C relay and the coin magnet at the calling station. This circuit is traced from 110 volts positive battery, through the 6-D resistance lamp, winding of the C relay, make contact of the collect key, lead B, over the tip and ring side of the toll cordless and final circuits, to ground through the coin magnet at the calling station. The C relay operated, closes a circuit from ground through its make contact, to battery through the lamp, lighting the lamp, and closes a circuit from lead B of the tone circuit through the 21-K condenser (1-MF) make contact of the C relay, over lead A, to ground through the winding of a repeating coil in the toll cordless selector circuit, thus transmitting by induction a low tone back to the toll operator, as an indication that the coin is being collected. When the coin has been collected, or the collect key is released, the circuit through the C relay is opened, releasing the relay. The C relay

released, extinguishes the lamp and disconnects the tone, thereby restoring the circuit to normal.

5. If the coin is to be returned, the return key (red) is operated. The circuit under this condition functions the same as described under paragraph 4, except that the R relay operates instead of the C relay, and the coin is returned instead of collected. A high tone instead of a low tone is also transmitted back to the toll operator, as an indication that the coin is being returned.

FIGURES 4, 5, AND 6.

6. When the collect key (black) is operated, ground is connected to lead CC, operating a relay in the toll cordless selector circuit. A circuit is now closed operating the C relay and coin magnet at the calling station from 110 volt positive battery through the 6-D resistance lamp, break contact of the CC relay, winding of the C relay, make contact of the collect key, lead C, over the tip and ring side of the toll cordless selector and final circuits, to ground through the coin magnet at the calling station. The C relay operated, closes a circuit operating the R (162-R) and A relays, lights the lamp and connects a low tone to lead B. The R relay operated, connects ground over lead A, holding a relay in the toll cordless selector circuit operated. The A relay operated, closes a circuit from battery through its outer winding and make contact, outer winding of the B relay, to the 149-H interrupter. When the interrupter contact (which has a .53 second make and a .53 second break) makes, the A relay locks through its outer winding, and the B relay operates through its outer winding. The B relay operated, opens the circuit through the inner winding of the A relay, and locks through its own inner winding in series with the lamp. When the interrupter contact breaks, the holding circuit through the outer winding of the A relay is open, releasing the A relay. With the A relay released and the B relay operated, a circuit is closed, operating the CC relay, when the interrupter contact again makes. This circuit is traced from battery through the winding of the CC relay, make contact of the B relay, break contact of the A relay, outer winding of the B relay to ground through the interrupter. The CC relay operated, disconnects the 110 volt positive battery from the winding of the C relay which releases. The C relay released, releases the B relay, which in turn releases the CC relay and extinguishes the lamp, thereby indicating that the collect key may be released. The C relay released, also releases the R (162-R) relay, and opens the tone circuit. The R relay released in turn releases the relay in the toll cordless selector circuit. The R relay, however, is slow in releasing so that the relay in the toll cordless selector circuit will immediately release.

7. When the return key (red) is operated, the circuit functions the

same as described under paragraph 6, with the exception that the R relay (B-162) operates instead of the C relay, performing the same functions and a high tone is connected to lead B, instead of a low tone.

8. Note: If the traffic is such that it is not necessary to hold the key operated, the time interval feature is cancelled. Under this condition the circuit returns to normal when the key is released.

## CIRCUIT REQUIREMENTS

| | OPERATE | NON-OPERATE | RELEASE |
|---|---|---|---|
| 162-R (R) | Test .023 amp.<br>Readj. .021 amp. | Test .016 amp.<br>Readj. .017 amp. | |
| B162 (C & R) Fig. 3 | Test .046 amp.<br>Readj. .032 amp. | | Test .0035 amp.<br>Readj. .007 amp. |
| B162 (C & R) Fig. 6 | Test .044 amp.<br>Readj. .032 amp. | | Test .0035 amp.<br>Readj. .007 amp. |
| E111 (CC) | Test .039 amp.<br>Readj. .017 amp. | | Test .0033 amp.<br>Readj. .0035 amp. |
| E120 (A) Inner winding (9.5 ohms) | Test .098 amp.<br>Readj. .077 amp. | Test .054 amp.<br>Readj. .057 amp. | |
| Outer winding (45 ohms) | Test .128 amp. | | |
| E121 (B) Outer winding (105 ohms) | Test .088 amp.<br>Readj. .083 amp. | | Test .014 amp.<br>Readj. .015 amp. |
| Inner winding (9.5 ohms) | Hold:<br>Test .118 amp. | | |
| E1795 (B) Outer winding (110 ohms) | Test .073 amp.<br>Readj. .052 amp. | | Test .0019 amp.<br>Readj. .002 amp. |
| Inner winding (10 ohms) | Hold:<br>Test .093 amp. | | |

## CIRCUIT REQUIREMENTS

| | OPERATE | NON-OPERATE | RELEASE |
|---|---|---|---|
| E1796 (A) Inner winding (9.5 ohms) | Test .100 amp.<br>Readj. .082 amp. | Test .052 amp.<br>Readj. .055 amp. | |
| Outer winding (105 ohms) | Test .073 amp. | | |